2-Flute, Neck Relief Square & Standard Ball End, Extra High Performance Endmills, 45 Degree Helix for Aluminum and Non-Ferrous Materials.

- Redline 2 Flute, Extra High Performance Endills are designed for milling all Aluminum including die cast extrusions and other non ferrous alloys.
- These Extra High Performance tools can be found on pages 15 & 16.

Aluminum & Non-Ferrous Speeds & Feeds

Material	Grades	Cut Type	Axial DOC	Radial DOC	# of Flutes	SFM	Feed by Endmill Diameter (IPT) 1/8 (.1250)	1/4 (.2500)	3/8 (.3750)	1/2 (.5000)	5/8 (.6250)	3/4 (.7500)	1 (1.000)
N - Non-Ferrous													
Aluminum Alloys	2024, 6061, 7075	Slotting	1 x D	1 x D	2	800	.0018	.0036	.0054	.0072	.0090	.0108	.0144
			.75 x D	1 x D	3	800	.0015	.0030	.0045	.0060	.0075	.0090	.0120
		Peripheral - Rough	1 x D	.75 x D	2	1000	.0025	.0050	.0075	.0100	.0125	.0150	.0200
			1 x D	.75 x D	3	1000	.0020	.0040	.0060	.0080	.0100	.0120	.0160
		Finish	1.5 x D	.01 x D	2	1200	.0030	.0060	.0090	.0120	.0150	.0210	.0240
			1.5 x D	.01 x D	3	1200	.0025	.0050	.0075	.0100	.0125	.0150	.0200
Aluminum High Silicon	A380, A390	Slotting	.75 x D	1 x D	2	500	.0013	.0026	.0039	.0052	.0065	.0078	.0104
			.5 x D	1 x D	3	500	.0011	.0022	.0033	.0044	.0055	.0066	.0088
		Peripheral - Rough	1 x D	.5 x D	2	700	.0016	.0033	.0049	.0065	.0081	.0098	.0130
			1 x D	.5 x D	3	700	.0014	.0028	.0041	.0055	.0069	.0083	.0110
		Finish	1.5 x D	.01 x D	2	900	.0020	.0041	.0061	.0082	.0102	.0122	.0163
			1.5 x D	.01 x D	3	900	.0017	.0035	.0052	.0069	.0086	.0104	.0138
Brass/Bronze	Aluminum Bronze, Low Silicon Bronze	Slotting	.75 x D	1 x D	2	500	.0011	.0022	.0033	.0044	.0055	.0066	.0088
			.75 x D	1 x D	3	500	.0009	.0018	.0027	.0036	.0045	.0054	.0072
		Peripheral - Rough	1 x D	.75 x D	2	575	.0011	.0022	.0033	.0044	.0055	.0066	.0088
			1 x D	.75 x D	3	575	.0013	.0026	.0039	.0052	.0065	.0078	.0104
		Finish	1.5 x D	.01 x D	2	650	.0018	.0036	.0054	.0072	.0090	.0108	.0144
			1.5 x D	.01 x D	3	650	.0015	.0030	.0045	.0060	.0075	.0090	.0120
Composites	G-10, Fiberglass, Graphite, Graphite Epoxy, Plastics	Slotting	1 x D	1 x D	2	500	.0013	.0026	.0039	.0052	.0065	.0078	.0104
			1 x D	1 x D	3	500	.0011	.0022	.0033	.0044	.0055	.0066	.0088
		Peripheral - Rough	1 x D	.75 x D	2	700	.0016	.0033	.0049	.0065	.0081	.0098	.0130
			1 x D	.75 x D	3	700	.0014	.0028	.0041	.0055	.0069	.0083	.0110
		Finish	1.5 x D	.01 x D	2	900	.0020	.0041	.0061	.0082	.0102	.0122	.0163
			1.5 x D	.01 x D	3	900	.0017	.0035	.0052	.0069	.0086	.0104	.0138
Copper		Slotting	.75 x D	1 x D	2	500	.0011	.0022	.0033	.0044	.0055	.0066	.0088
			.75 x D	1 x D	3	500	.0009	.0018	.0027	.0036	.0045	.0054	.0072
		Peripheral - Rough	1 x D	.75 x D	2	575	.0011	.0022	.0033	.0044	.0055	.0066	.0088
			1 x D	.75 x D	3	575	.0013	.0026	.0039	.0052	.0065	.0078	.0104
		Finish	1.5 x D	.01 x D	2	650	.0018	.0036	.0054	.0072	.0090	.0108	.0144
			1.5 x D	.01 x D	3	650	.0015	.0030	.0045	.0060	.0075	.0090	.0120
Magnesium		Slotting	1 x D	1 x D	2	800	.0018	.0036	.0054	.0072	.0090	.0108	.0144
			.75 x D	1 x D	3	800	.0015	.0030	.0045	.0060	.0075	.0090	.0120
		Peripheral - Rough	1 x D	.75 x D	2	1000	.0025	.0050	.0075	.0100	.0125	.0150	.0200
			1 x D	.75 x D	3	1000	.0020	.0040	.0060	.0080	.0100	.0120	.0160
		Finish	1.5 x D	.01 x D	2	1200	.0030	.0060	.0090	.0120	.0150	.0210	.0240
			1.5 x D	.01 x D	3	1200	.0025	.0050	.0075	.0100	.0125	.0150	.0200

D = tool diameter. Reduce feed rates by 20% when using long length tools. Starting parameters shown.
NOTE: Speeds and Feeds listed are estimated and will vary by application.